



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,210	01/20/2004	Hitoshi Suzuki	062709-0127	8071
22428	7590	06/29/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			SPISICH, GEORGE D	
			ART UNIT	PAPER NUMBER
			3616	

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/759,210	Applicant(s) SUZUKI ET AL.	
	Examiner George D. Spisich	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-11 and 13-22 is/are pending in the application.
 4a) Of the above claim(s) 6, 7, 13 and 14 is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-4, 8-11 and 15-22 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (USPN 5,125,685).

Takahashi et al. disclose a harness slack take-up structure for taking up a slack of a harness extended from a steering wheel (see Fig. 6). Inherently, the steering arrangement includes a steering shaft to which a steering wheel is fixed, a steering column configured to rotatably accommodate the steering shaft and slidable together with the steering shaft in a longitudinal direction thereof (again, see Figure 6).

The harness (9 or 30) extends in a frontward direction from the steering wheel and has a slack (9a). There is a slack holder (19) configured to contain the slack of the harness. A movable part (10) is movable in the slack holder configured to slide with the steering column in the front and rear direction, and a fixed part (24 or 11,27) relatively fixed to the slack holder. The first end of the slack being held by the movable part (10) and the second end of the slack held by the fixed part (24 or 11,27). The second end

with respect to 24 is "fixed" similarly to the manner the second end is "fixed" in Applicant's invention.

When the fixed part is considered portion 11,27, the part has an unimpeded line of sight to "at least a portion" of the movable part since the movable part includes all of the structure that moves and clearly includes portion 17 of the movable part. The fixed parts and the movable part continuously having the slack of the harness therebetween as this is a broad limitation and at least a portion if not all of the "slack" is "continuously therebetween.

When the fixed part is considered portion 24, there is at least an unimpeded line of sight of side portion of element 24 to a side portion of element 17 of the movable member.

The slack holder is fixed relative to a vehicle body and the second end of the slack is fixed at a position offset from a central portion of the moving range of the movable part. The distance between an extreme forward position and an extreme rearward position defines a moving range of the movable part.

As shown in Figure 7, the first end of the slack is zigzagged in the movable part (10) so that the first end is held by the movable part.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (USPN 5,125,685) in view of Horiuchi et al. (USPN 5,229,544).

Takahashi et al. has been discussed in the prior rejection. However, Takahashi et al. does not a second slack holder having a having a cylindrical inner hollow to store the slack.

Horiuchi et al. disclose a harness slack take-up structure having a slack holder fixed relative to the steering column (see col. 1, lines 31-40), having an inner cylinder (3,3a) through which the steering shaft is passed, an outer cylinder (4) rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder. The length of the slack corresponding to a range in a rotational angle of the steering wheel, the first end of the slack being held by the inner cylinder and a second end of the slack being held by the outer cylinder and the slack being stored in the cylindrical hollow (as best seen in Figure 1). This arrangement allows for the adjustment of slack according to the rotational angle of the steering wheel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering wheel arrangement having a longitudinal harness slack take-up structure of Takahashi et al. by providing a rotary harness slack take-up structure of Horiucki et al. so as to allow for the slack adjustment in the longitudinal direction as taught by Takahaski et al. and also the rotational slack

adjustment as taught by Horiuchi et al. The relative location of the arrangement of Horiuchi et al. to be between the steering wheel and the slack take-up structure of Takahashi et al. would be an obvious location to allow for the rotary adjustment at the steering wheel.

Claims 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (USPN 5,125,685) in view of Maeda et al. (USPN 5,556,059) providing in Applicant's IDS.

Takahashi et al. has been discussed in the prior rejection. However, it appears that Takahashi et al. discloses a flat ribbon type harness (cable) having a non-circular cross section.

Maeda et al. discloses a harness slack accommodating arrangement and a harness/cable having a round/circular cross section. Therefore it is taught that using a round harness is known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the arrangement of Takahashi et al. so as to use a round harness as taught by Maeda et al. so as to provide a more stable and durable harness. The modification of the housing of Takahashi et al. would be obvious and within the ordinary skill in the art so as to provide the attaching members to be compatible with a different shaped harness such as circular or round in cross section.

Response to Arguments

Applicant's arguments filed April 5, 2006 have been fully considered but they are not persuasive.

With respect to Applicant's argument that the fixed part being 24 would not continuously have the slack between the fixed and movable member, Examiner disagrees and maintains the rejection. The phrase "slack continuously therebetween" is broad and it is understood that the slack when is between these members similarly to Applicant's.

With respect to Applicant's argument that the fixed part being 11 (and Examiner restates also 27 as they are integral) the slack prevents the fixed part from having "an unimpeded line of sight to at least a portion of the movable member", Examiner disagrees and maintains the rejection. Applicant has stated that this part meets the "slack continuously therebetween" limitation and Examiner states that at least a portion of the fixed member (11,27) has an unimpeded line of sight with "at least a portion (which may be 17) of the movable member.

Examiner restates that whether the interpretation of the fixed member is 24 or 11,27, both of these elements broadly read on the limitations that are stated above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George D. Spisich
June 23, 2006



PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600